*Journal of the Lepidopterists' Society*
39(4), 1985, 262–265

# A NEW SPECIES OF CLEARWING MOTH, *CARMENTA LAURELAE* (SESIIDAE), FROM FLORIDA

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**ABSTRACT.** A new species of clearwing moth, *Carmenta laurelae,* was discovered in west-central Florida using the synthetic pheromone, (Z,Z) 3, 13-octadecadien-1-ol acetate and is herein described. The type series consists of 75 male specimens which were taken only in cypress swamps and the adjacent forested floodplain habitats. The flight period of the adult males occurred from 1100–1400 h daily. Adults were captured only between 13 May to 3 June 1985 in the Tampa Bay area.

Although the North American sesiids have been the subject of two monographs (Beutenmuller, 1901; and Engelhardt, 1946), the fauna is still imperfectly known. The development of several chemical sex attractants by Tumlinson and colleagues (1974) and Schwarz and colleagues (1983) has greatly aided the collecting of clearwing species and also helped elucidate their ecological and taxonomic relationships (Duckworth & Eichlin, 1977).

While using a variety of sesiid sex attractants to survey for the moths in the Tampa Bay area of west-central Florida during 1985, a new species of clearwing moth was captured in May and early June. The description of this species follows.

## Genus *Carmenta* Hy. Edwards

### *Carmenta laurelae*, new species

Male (Fig. 1): **Head.** Front brown-black, white laterally; vertex brown-black; occipital fringe yellow laterally, orange-yellow and brown-black mixed dorsally; labial palps smoothly scaled, dark brown dorsally and laterally, orange-yellow ventrally; antennae brown-black, some pale yellow powdering dorso-medially.

**Thorax.** Brown-black with narrow subdorsal orange-yellow stripes; orange-yellow patch beneath wings. Legs brown-black, with much orange-yellow on forecoxa, near tibial spurs, on first tarsal segments and at tarsal joints.

**Wings.** Forewing slightly more than one-half hyaline but with broad brown-black apical region, leaving small circular hyaline area just distad of discal spot, discal cell and region below Cu hyaline, no light scaled powdering dorsally; ventrally with costal margin orange-yellow and some orange-yellow powdering between veins on apical region. Hindwing hyaline; ventrally with some orange-yellow on costal margin. Forewing length: 9–10 mm.


FIG. 1. *Carmenta laurelae*, adult male.

**Abdomen.** Mostly brown-black, dorsally with narrow orange-yellow band at posterior edge of segment 2, broader but still narrow band on posterior margin of segment 4, very narrow band on posterior edge of segment 7; ventrally with narrow orange-yellow bands on posterior margin of segments 4–7; anal tuft somewhat wedge-shaped but truncate at apex, with some orange-yellow at tips of lateral scales and ventrally on tip of abdomen.

**Male genitalia.** As illustrated (Fig. 2), with saccus somewhat uncharacteristic for species of *Carmenta*, being only about one-third total length of valve and bilobed apically but with other features typical for the genus.

**Female.** Unknown.

**Host plant.** Unknown.

**Distribution.** Florida.

**Types.** Holotype: Male, University of South Florida Ecological Research Area, Tampa, Hillsborough County, Florida, V-13-1985, Coll. L. N. Brown, ZZ-3, 13 ODDA pheromone; deposited in National Museum of Natural History (NMNH), Washington, D.C. Paratypes: 74 males, deposited in NMNH; California Department of Food and Agriculture (CDFA), Sacramento; Florida State Collection of Arthropods, Gainesville; and author's collection, University of South Florida, Tampa.

**Discussion.** This species is only known from the 75 male specimens of the type series, which were taken at five different localities in Hillsborough County, Florida. The first specimen appeared in a sticky trap on 13 May 1985, and the last individual was taken 3 June 1985 (a flight

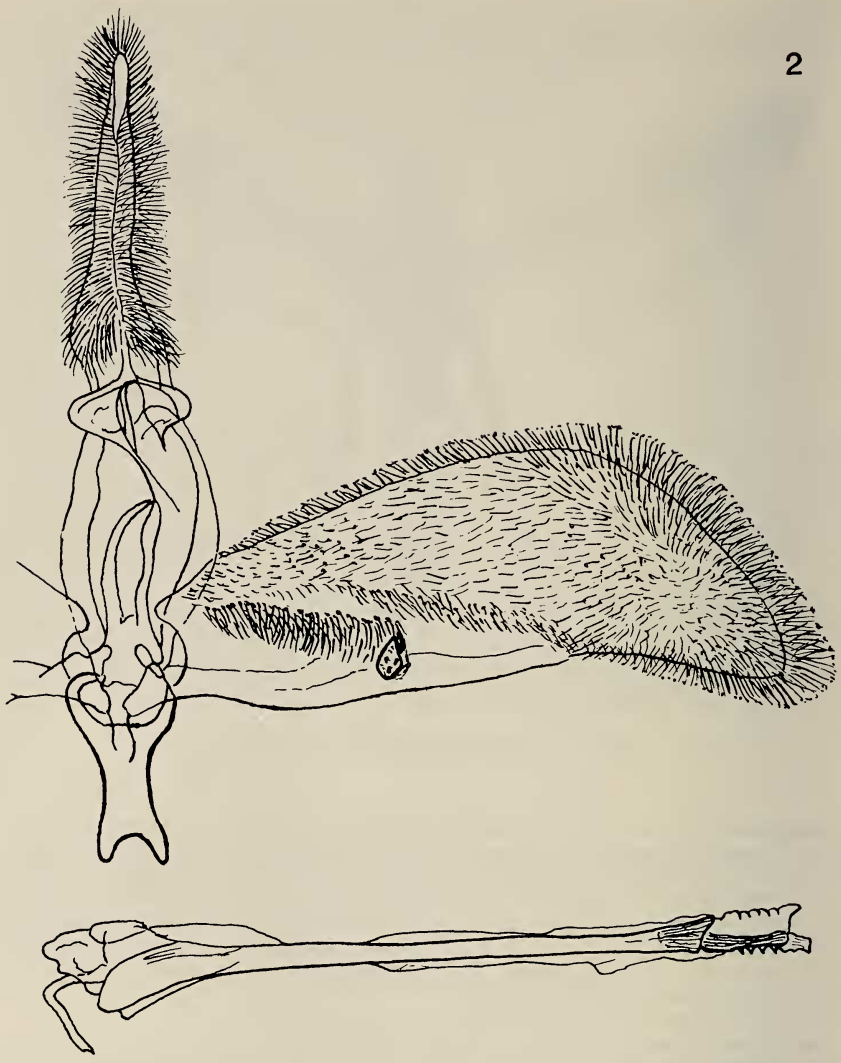


FIG. 2. *Carmenta laurelae*, male genitalia (ventral view, left valve removed).

period of three weeks). All individuals were captured within cypress swamps and adjacent floodplain forests. *Carmenta laurelae* was never taken at any pheromone isomer other than (Z,Z) 3, 13-ODDA, although several other sex attractants were constantly available.

Pheromone traps were checked at hourly intervals for several days to determine the duration of the daily flight period of male *C. lauralae*.

They came to traps only between 1100–1400 h, with the greatest flight activity occurring around noon.

This moth is named in honor of Laurel Brown, only daughter of the collector of the new clearwing species.

## ACKNOWLEDGMENTS

We thank Charles S. Papp, Sierra Graphics and Typography, Sacramento, California, for final inking of the drawing and for photographing the adult moth. Also, thanks go to Isa Montenegro, Agricultural Biological Technician, CDFA, Sacramento, for various technical assistance.

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